

**REMARKS**

This Amendment is filed in response to the Office Action mailed Nov. 15<sup>th</sup>, 2005.

All objections and rejections are respectfully traversed.

Claims 1-51 are now pending in the case.

Claim 11 has been amended.

Claims 35-51 have been added to more fully claim the invention. Such claims are believed to be allowable over the cited prior art.

***Claim Rejections - 35 U.S.C. §103***

At paragraphs 2 of the Office Action, claims 1-2, 4-5, 7-8, 10, 16-20, 24-26, 28-29, 31, and 33-34 were rejected under 35 U.S.C. §102(e) as anticipated by Aguilar et al., U.S. Patent No. 6,785,807, issued on Aug. 31, 2004 (hereinafter Aguilar).

The Applicant's claim 1, representative in part of the other rejected claims, sets forth:

1. A file server system for a computer having a processor, a memory coupled to the processor, and a system bus to which the processor and memory are coupled, the computer being configured to implement a file system, the file server system comprising:

(A) a storage operating system adapted to be executed by the processor;

(B) a removable nonvolatile memory device coupled to the system bus, the removable nonvolatile memory device containing diagnostics code for the system; and

(C) a set of boot instructions resident in the filer server system including instructions for executing a normal boot routine upon a power-on of the system, and including instructions enabling the processor to identify the removable nonvolatile memory device and *to load the diag-*

*agnostics code into the memory in response to a command to execute a diagnostics boot routine instead of the normal boot routine.*

Aguilar discloses a data processing system which has a hard-wired ROM and optionally a removable compact flash card. Normally the system boots using the ROM, which is configured to perform “standard boot operations, such as executing a built-in self test (BIST) and loading a BIOS.” See col. 4, lines 37-43. But, “if the compact flash-card 262 is connected to the compact flash connector 260 when the system is booted,” the data processing system will utilize the compact flash card “in lieu of ROM 214 as the source of the bootcode.” See col. 4, lines 63-67. A diagnostic startup program may be stored on the compact flash card, for engineers to validate the hardware during the “engineering and manufacturing phases of production.” See col. 4, lines 67 to col. 5, line 5.

The Applicant respectfully urges that Aguilar is silent concerning the Applicant’s claimed “*to load the diagnostics code into the memory in response to a command to execute a diagnostics boot routine instead of the normal boot routine.*”

While the Applicant claims executing a diagnostic boot routine in response to a command to execute a diagnostics boot routine, Aguilar teaches executing a diagnostic startup program simply “if the compact flashcard 262 is connected to the compact flash connector 260 when the system is booted,” See Aguilar col. 4, lines 65-67. Apparently, mere insertion of Aguilar’s compact flash card into the compact flash connector will cause the diagnostic startup routine to execute. While this may be acceptable in the “engineering and manufacturing phases of production” that Aguilar describes, it is undesirable in other settings to require a user to physically connect or disconnect a component to control boot operation. Accordingly, the Applicant claims loading diagnostic code, in response to a command to execute a diagnostics boot routine. Aguilar teaches away from providing such a command.

Accordingly, the Applicant respectfully urges that Aguilar is legally insufficient to anticipate the present claims under 35 U.S.C. §102 because of the absence of the Ap-

plicant's claimed novel "*to load the diagnostics code into the memory in response to a command to execute a diagnostics boot routine instead of the normal boot routine.*"

***Claim Rejections - 35 U.S.C. §103***

At paragraph 3 of the Office Action, claims 3, 9, 21-23, 27, 30, and 32 were rejected under 35 U.S.C. §103(a) as unpatentable over Aguilar in view of Orr, U.S. Patent No. 6,189,114, issued on Feb 13<sup>th</sup>, 2001 (hereinafter Orr).

The Applicant respectfully notes claims 3, 9, 21-23, 27, 30 and 32 are dependent claims that depend from independent claims believed to be allowable. Accordingly, the dependent claims are also believed to be allowable.

At paragraph 4 of the Office Action, claims 11-15 were rejected under 35 U.S.C. §103(a) as unpatentable over Orr in view of Aguilar.

The Applicant's claim 11, representative in part of the other rejected claims, sets forth:

11. A method of performing diagnostics in a filer server system, the filer server system having a processor, a memory coupled to the processor and having memory locations addressable by the processor, a storage operating system adapted to be executed by the processor, system firmware containing instructions for power-on self tests, a set of boot instructions including instructions for executing a normal boot routine upon a power-on of the system after the power-on self test is completed, the method comprising the steps of:

- (A) providing a removable nonvolatile memory device interfaced with the motherboard, the removable nonvolatile memory device being identifiable to the processor;
- (B) dividing the removable nonvolatile memory device into separate memory partitions;
- (C) storing a set of diagnostics instructions, being a diagnostics code, in one of the partitions of the removable nonvolatile memory device; and

*(D) programming the system firmware to recognize a user implemented command entered during the normal boot routine for a diagnostics boot such that in response to the diagnostics boot command, the firmware loads the diagnostics code residing in the removable nonvolatile memory device into the memory to execute a diagnostic boot routine instead of a normal boot routine.*

Aguilar is described above.

Orr discloses a server (Fig. 1, item 40) remotely managed and controlled by a controlling computer (Fig. 1, item 10). *See Orr at col. 4, lines 38-65.* The server system 40 has a hardwired flash ROM (Fig. 2, item 50) containing a BIOS (item 60), a Power-on Self Test (POST) routine (item 62), and containing a diagnostic program (item 64), which when invoked, performs diagnostic testing of the server system. *See Id. at col. 3, lines 2-6 and col. 5 lines 14-31.* Prior to booting the server (*see Fig 5, 102*), remote management software on the controlling computer sets a flag in a CMOS (Fig. 1, item 51) internal to the server that triggers the POST routine to invoke the diagnostic program. *See Id. col. 5, lines 56-59.*

The Applicant respectfully urges that both Aguilar and Orr are silent concerning the Applicant's claimed "*programming the system firmware to recognize a user implemented command entered during the normal boot routine for a diagnostics boot such that in response to the diagnostics boot command, the firmware loads the diagnostics code residing in the removable nonvolatile memory device into the memory to execute a diagnostic boot routine instead of a normal boot routine.*"

While the Applicant claims *a user implemented command entered during the normal boot routine...to execute a diagnostic boot routine instead of a normal boot routine* both references teach away from such a feature. As described above, Aguilar teaches one should control booting by inserting or removing a compact flash card from a compact flash connector, to thereby cause a diagnostic startup routine or a normal routine to execute. Orr teaches that prior to booting a server, remote management software

should be used to set a flag in a CMOS, such flag later causing a diagnostic program to execute when the system is subsequently rebooted. Thus following the teachings of Aguilar and Orr one would be led to believe and action must be taken prior to booting a system to invoke a diagnostic routine on that boot. Neither reference suggests *a user implemented command entered during the normal boot routine to cause a diagnostic boot routine instead of a normal boot routine.*

Therefore the Applicant respectfully urges that Aguilar and Orr are legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant's claimed novel "*programming the system firmware to recognize a user implemented command entered during the normal boot routine for a diagnostics boot such that in response to the diagnostics boot command, the firmware loads the diagnostics code residing in the removable nonvolatile memory device into the memory to execute a diagnostic boot routine instead of a normal boot routine.*"

In the event that the Examiner deems personal contact desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

All independent claims are believed to be in condition for allowance.

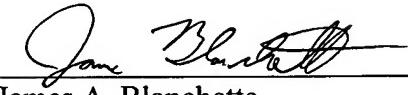
All dependent claims are believed to be dependent from allowable independent claims.

The Applicant respectfully solicits favorable action.

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Respectfully submitted,

  
James A. Blanchette  
Reg. No. 51,477  
CESARI AND MCKENNA, LLP  
88 Black Falcon Avenue  
Boston, MA 02210-2414  
(617) 951-2500